

**Article 4.8. The Collection of Information Relating to Hull Husbandry Practices
of Vessels for Control of Marine Invasive Species in Waters of California
Biofouling Management to Minimize the Transfer of Nonindigenous Species
from Vessels Operating in California Waters**

Section 2298. Hull Husbandry Reporting Form.

- (a) ~~Section 71205(e) of the Public Resources Code requires the master, owner, operator, agent, or person in charge of a vessel carrying, or capable of carrying, ballast water into the coastal waters of the State to file the “Hull Husbandry Reporting Form” developed by the California State Lands Commission providing information regarding the hull husbandry practices relating to the vessel, within 60 days of receiving a written or electronic request from the Commission.~~
- (b) ~~The following form “Hull Husbandry Reporting Form” is hereby incorporated by reference and shall be used by the master, owner, operator, agent, or person in charge of a vessel carrying, or capable of carrying, ballast water into the coastal waters of the State to comply with the provisions of Section 71205(e) of the Public Resources Code.~~

Authority: ~~Public Resources Code Sections 71201 and 71204.6~~

Reference: ~~Public Resources Code Sections 71205(e) and 71205(f)~~

Section 2298.1. Purpose, Applicability, and Date of Implementation.

- (a) The purpose of the regulations in Title 2, Division 3, Chapter 1, Article 4.8 of the California Code of Regulations is to move the State expeditiously toward elimination of the discharge of nonindigenous species into the waters of the State, or into waters that may impact the waters of the State, based on the best available technology economically achievable.
- (b) The provisions of Article 4.8 apply to all vessels carrying, or capable of carrying, ballast water that arrive at a California port or place, except those vessels that are exempt under Section 71202 of the Public Resources Code or those vessels that satisfy the requirements of the emergency exemption clause in 2 CCR §2298.9.1.
- (c) For the purposes of Article 4.8, all ports and places in the San Francisco Bay area East of the Golden Gate bridge, including the Ports of Stockton and Sacramento, shall be interpreted as the same “California port or place”; the Ports of Los Angeles, Long Beach, and the El Segundo marine terminal shall be interpreted as the same “California port or place.”

- (d) The provisions of these regulations shall become effective July 1, 2016.
- (e) Commission staff shall continue to collect and evaluate all available data to assess the effectiveness of the regulations contained within Article 4.8. The Commission shall revise these regulations to adopt biofouling compliance assessment protocols and make any other revisions as necessary to fulfill the purpose of these regulations, as described in subdivision (a) of this section.

Authority Cited: Sections 71201, 71201.7, 71202 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71202, 71204.6, 71205 and 71207, Public Resources Code

Section 2298.2. Definitions.

Unless the context otherwise requires, the following definitions shall govern the construction of this Article:

- (a) “Anti-fouling coating” means any paint or other coating that prevents or deters the attachment and growth of biofouling organisms on the wetted portions of a vessel. Anti-fouling coatings can include biocidal or non-biocidal anti-fouling coatings.
- (b) “Anti-fouling system” means a coating, paint, surface treatment, surface, or device that is used on a vessel to minimize or prevent attachment, growth, or association of biofouling.
- (c) “Biocidal anti-fouling coating” means an anti-fouling coating containing one or more chemical substances that are toxic or act as a deterrent to the settlement of living organisms.
- (d) “Biofouling,” also referred to as hull fouling or marine growth, means the attachment or association of marine organisms to the wetted portions of a vessel or its appurtenances, including but not limited to, sea chests, propellers, anchors and associated chains, and other niche areas. Biofouling can include microfouling and macrofouling.
- (e) “Biofouling compliance assessment protocols” means protocols that describe the processes, methods, and statistical considerations that Commission staff will use to assess compliance with those regulatory provisions that include a performance standard based on percentage cover. These protocols will be adopted in future revisions of the regulations contained within this article.
- (f) “CCR” means the California Code of Regulations.

- (g) “Commission staff” means the staff of the California State Lands Commission.
- (h) “Division Chief” means the Chief of the Marine Facilities Division of the California State Lands Commission or any employee of the Marine Facilities Division authorized by the Chief to act on her or his behalf.
- (i) “Effective coating lifespan” means the age of an anti-fouling coating, as determined by the manufacturer and based on the vessel-specific application scheme (e.g. coating thickness), at which the coating is no longer expected to satisfactorily prevent or deter the attachment and growth of biofouling organisms.
- (j) “Extended residency period” means remaining in one port or place consecutively for forty-five days or longer.
- (k) “Foul-release coating” means a non-biocidal anti-fouling coating with surface properties that minimize the adhesion strength of biofouling, resulting in organism detachment by vessel movement.
- (l) “Geographic location” means a port, anchorage, city and country, or latitude and longitude coordinates.
- (m) “In-water cleaning” means the physical removal of biofouling from the wetted portions of a vessel while the vessel remains in the water.
- (n) “In-water inspection” means underwater survey or inspection by diver(s) or with remotely operated vehicle(s). Inspections of a vessel’s hull and other underwater surfaces for purposes other than surveying biofouling may be considered opportunities for evaluating the extent of biofouling.
- (o) “In-water treatment” means any method or process that is aimed at killing or inactivating, but not removing, biofouling from the wetted portions of a vessel while the vessel remains in the water. In-water treatment may render organisms inactive, but any remnants that remain may serve as suitable substrate to facilitate further biofouling.
- (p) “Macrofouling” means large, distinct multicellular organisms visible to the human eye such as barnacles, tubeworms, or fronds of algae.
- (q) “Marine Growth Prevention System” or “MGPS” means an anti-fouling system device used to reduce or prevent biofouling accumulation in internal seawater systems and sea chests and can include the use of anodes, injection systems, and electrolysis.
- (r) “Microfouling” means microscopic organisms including, but not limited to, bacteria and single-celled algae and the slimy substances that they produce.

Biofouling comprised of only microfouling is commonly referred to as a slime layer.

- (s) “Niche area” means an area on a vessel that may be more susceptible to biofouling due to variable hydrodynamic forces, susceptibility to coating system wear or damage, or due to inadequate protection by anti-fouling systems. Examples of niche areas include, but are not limited to, sea chests, bow thrusters, propeller shafts, inlet gratings, and out-of-water support strips.
- (t) “Non-biocidal anti-fouling coating” means an anti-fouling coating that does not rely on one or more chemical substances intended to be toxic or act as a deterrent to organism settlement in order to achieve its anti-fouling properties. Non-biocidal anti-fouling coatings can include foul-release coatings.
- (u) “Obviously excessive biofouling” means macrofouling percentage cover significantly in excess of fifteen percent of the wetted surface under investigation, as determined using the biofouling compliance assessment protocols. Filamentous or turf algae on the bulbous bow and at the waterline, including one meter above and one meter below the waterline, shall be excluded from this calculation.
- (v) “Out-of-water maintenance” means removal of the vessel from the water and into a dry dock or slipway for inspection or maintenance. Out-of-water maintenance is commonly referred to as dry docking.
- (w) “Out-of-water support blocks” means support blocks placed underneath the vessel while the vessel is undergoing out-of-water maintenance in a dry dock or slipway.
- (x) “Out-of-water support strips” means sections of a vessel’s hull that rest on out-of-water support blocks while the vessel is undergoing out-of-water maintenance in a dry dock or slipway. These areas are typically not cleaned or treated with fresh anti-fouling systems, resulting in reduced anti-fouling protection.
- (y) “Percentage cover” means the percentage of the surface area under examination that is occupied by macrofouling, as determined using the biofouling compliance assessment protocols.
- (z) “Significantly in excess of” means statistically significantly greater than the percentage cover value referenced. Statistical significance will be dependent on percentage cover measurements, number of photographs collected, and level of acceptable uncertainty as defined by the biofouling compliance assessment protocols.
- (aa) “Vessel” means a vessel of 300 gross registered tons (GRT) or more.

- (bb) “Waterline” means the line along the external hull of a vessel where the surface of the water interfaces with the hull of the vessel. The waterline is not a fixed location; its placement is dependent on a vessel’s load or ballast condition.
- (cc) “Wetted portion of a vessel” means all parts of a vessel's hull and structures that are either submerged in water when the vessel is loaded to the deepest permissible draft or associated with internal piping structures in contact with water taken onboard.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6, 71205 and 71207, Public Resources Code

Section 2298.3. Biofouling Management Plan.

- (a) The provisions described in this section apply to newly constructed vessels delivered into service on or after July 1, 2016, and to existing vessels beginning with completion of the first out-of-water maintenance on or after July 1, 2016.
- (b) The master, owner, operator, or person in charge of a vessel arriving at a California port or place shall maintain a Biofouling Management Plan to be retained onboard and prepared specifically for that vessel. Upon request, the plan shall be made available to Commission staff for inspection and review. This plan shall provide a description of the biofouling management strategy for the vessel that is sufficiently detailed to allow a master or other appropriate ship's officer or crew member serving on that vessel to understand and follow the biofouling management strategy. This plan shall be regularly reviewed and revised so as to be current as of the last day of the most recent out-of-water maintenance, or as of delivery if the vessel has never undergone out-of-water maintenance. At a minimum, this plan shall:
- (1) Maintain consistency with the components of the Biofouling Management Plan described in the International Maritime Organization’s “Guidelines for the Control and Management of Ships’ Biofouling to Minimize the Transfer of Invasive Aquatic Species (adopted on July 15, 2011),” hereby incorporated by reference; and
 - (2) Include separate lists describing the biofouling management practices and anti-fouling systems specifically used for the hull and each of the vessel’s niche areas listed in 2 CCR §2298.6(b)(1). For each anti-fouling system listed, include the following:
 - (A) Manufacturer name, model name, and product number, if applicable;

(B) Date each system was installed or applied;

(C) For anti-fouling coatings:

(i) Include the vessel's final specification document for the anti-fouling coating applied, or a separate list documenting the information required by this subsection. The specification document or separate list shall include the parameters of the vessel's operating profile used for the specification of the anti-fouling system, including, but not limited to:

(1) The specified intended out-of-water maintenance or dry-docking interval of the vessel;

(2) The specified range of vessel operating speeds;

(3) The specified vessel activity level (e.g. percentage of time underway at sea compared with percentage of time berthed, anchored, moored, or adrift), if applicable;

(4) The specified vessel operating area or trading routes (e.g. coastal, deep-sea), if applicable.

(ii) Specify the applied dry film thickness;

(iii) Specify the expected effective coating lifespan (e.g. 60 months) at applied dry film thickness; and

(iv) Include a copy of the International Maritime Organization's International Anti-fouling System Certificate.

(D) For MGPS:

(i) Indicate where anodes or dosing outlets are installed (i.e. sea chest, strainer, or other location within seawater intake system); and

(ii) Specify manufacturer's recommended doses and dosage frequency, if applicable.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6, 71205 and 71207, Public Resources Code

Section 2298.4. Biofouling Record Book.

- (a) The provisions described in this section apply to newly constructed vessels delivered on or after July 1, 2016, and to existing vessels beginning with completion of the first out-of-water maintenance on or after July 1, 2016.
- (b) The master, owner, operator, or person in charge of a vessel that operates in the waters of the State shall maintain a Biofouling Record Book to be retained onboard the vessel. The Biofouling Record Book must contain details of all inspections and biofouling management measures undertaken on the vessel since the beginning of the most recent scheduled out-of-water maintenance or since delivery as a newly constructed vessel if no out-of-water maintenance has yet occurred. At a minimum, this record book shall:

 - (1) Maintain consistency with the components of the Biofouling Record Book described in the International Maritime Organization's "Guidelines for the Control and Management of Ships' Biofouling to Minimize the Transfer of Invasive Aquatic Species (adopted on July 15, 2011)";
 - (2) Include a description of all completed niche area management practices, as required in 2 CCR §2298.6(b)(2); and
 - (3) Include a description of any occurrences since the most recent out-of-water maintenance when the vessel remained in the same geographic location for ten or more consecutive days. Details shall include, at a minimum:

 - (A) Geographic location where the vessel remained for ten or more consecutive days;
 - (B) Date of arrival at that geographic location;
 - (C) Date of departure from that geographic location;
 - (D) Any biofouling maintenance undertaken prior to (e.g. blanking off intakes), during, or following a residency period of ten or more consecutive days.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6, 71205 and 71207, Public Resources Code

Section 2298.5. Hull Husbandry Reporting Form.

The form “California State Lands Commission Marine Invasive Species Program Hull Husbandry Reporting Form (Revised June 5, 2014)” is hereby incorporated by reference. The master, owner, operator, agent or person in charge of a vessel carrying, or capable of carrying, ballast water into the coastal waters of the State shall submit the “Hull Husbandry Reporting Form (Revised June 5, 2014)” to the Commission in written or electronic form at least twenty-four hours in advance of the first arrival of each calendar year to a California port or place of call.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204, 71204.6, 71205 and 71207, Public Resources Code

Section 2298.6. Biofouling Management for Wetted Surfaces.

The provisions described in this section apply to newly constructed vessels delivered on or after July 1, 2016, and to existing vessels beginning with completion of the first out-of-water maintenance on or after July 1, 2016.

- (a) The master, owner, operator, or person in charge of a vessel arriving at a California port or place shall manage biofouling on the wetted surfaces of the vessel, except those niche areas described in subdivision (b) of this section, in any of the following ways:
 - (1) If a vessel is using an anti-fouling coating, the coating shall not be aged beyond its effective coating lifespan, as documented in 2 CCR §2298.3(b)(2)(C);
 - (2) If a vessel is using an anti-fouling coating and the coating is aged beyond its effective coating lifespan, as documented in 2 CCR §2298.3(b)(2)(C), the biofouling on the wetted surfaces of the vessel, except those niche areas listed in subdivision (b)(1) of this section, shall be managed so that macrofouling percentage cover is not significantly in excess of five percent of the surface area under investigation, as determined by Commission staff using the biofouling compliance assessment protocols. Filamentous or turf algae on the bulbous bow and at the waterline, including one meter above and one meter below the waterline, shall be excluded from this calculation; or
 - (3) If a vessel is not using an anti-fouling coating, the biofouling on the wetted surfaces of the vessel, except those niche areas listed in subdivision (b)(1) of this section, shall be managed so that macrofouling percentage cover is not significantly in excess of five percent of the surface area under

investigation, as determined by Commission staff using the biofouling compliance assessment protocols. Filamentous or turf algae on the bulbous bow and at the waterline, including one meter above and one meter below the waterline, shall be excluded from this calculation.

(b) The master, owner, operator, or person in charge of a vessel arriving at a California port or place shall manage biofouling on the niche areas listed in subdivision (b)(1) of this section, if present, in a manner consistent with the requirements listed in subdivision (b)(2) of this section. Any other niche areas should also be managed in a manner consistent with subdivision (b)(2) of this section.

(1) Biofouling management shall apply to the following niche areas, if present:

- (A) Sea chests;
- (B) Sea chest gratings;
- (C) Bow and stern thrusters;
- (D) Bow and stern thruster gratings;
- (E) Fins stabilizers and recesses;
- (F) Out-of-water support strips;
- (G) Propellers and propeller shafts; and
- (H) Rudders.

(2) Biofouling in niche areas must be managed using one or more biofouling management practices or strategies that are appropriate for the vessel and its operational profile.

- (A) All niche area management practices and strategies to be employed as part of the overall biofouling management strategy shall be listed in the Biofouling Management Plan, as required by 2 CCR §2298.3(b)(2).
- (B) All completed niche area management practices shall be documented in the Biofouling Record Book, as required by 2 CCR 2298.4(b)(2).
- (C) If any of the niche area management practices listed in the Biofouling Management Plan are not conducted as planned, the

reason(s) why the practice(s) were not conducted shall be documented in the Biofouling Record Book.

(c) A vessel shall not exhibit obviously excessive biofouling upon arrival to a California port or place. If, upon inspection utilizing the biofouling compliance assessment protocols, Commission staff detects obviously excessive biofouling, the master, owner, operator, or person in charge of a vessel shall:

(1) Receive a written warning indicating the occurrence of obviously excessive biofouling, if either of the following occurs:

(A) Current detection of obviously excessive biofouling is restricted to a vessel's sea chests, sea chest gratings, and/or bow or stern thrusters; or

(B) Current detection of obviously excessive biofouling for any wetted surface except sea chests, sea chest gratings, and/or bow or stern thrusters is:

(i) The first occurrence in California since the most recent of either the previous out-of-water maintenance or the vessel's delivery; and

(ii) The vessel remains in State waters for less than 96 hours.

(2) Be in violation of this article, if:

(A) Current detection of obviously excessive biofouling for any wetted surface except sea chests, sea chest gratings, and/or bow or stern thrusters is the second or subsequent occurrence in California since the vessel's most recent out-of-water maintenance or since delivery if the vessel has not undergone an out-of-water-maintenance; or

(B) The vessel exhibits obviously excessive biofouling for any wetted surface except sea chests, sea chest gratings, and/or bow or stern thrusters and remains in State waters for 96 hours or more.

(3) Be required to manage the biofouling prior to the vessel's next arrival to a California port or place, using the following approaches:

(A) The niche areas listed in subdivision (b) of this section, if present, must be evaluated and managed in a manner that is consistent with the niche area management practices listed in the Biofouling Management Plan, and all activities shall be documented in the

Biofouling Record Book; and

- (B) The wetted portions of the vessel identified in subdivision (a) of this section shall be managed so that upon the vessel's next arrival to a California port or place, macrofouling percentage cover is not significantly in excess of five percent, as determined by Commission staff using the biofouling compliance assessment protocols, with the following exceptions:
- (i) If a vessel found to exhibit obviously excessive biofouling is scheduled to arrive at another California port or place within 21 days, there shall be a 21-day grace period commencing on the date of violation, to allow for scheduling and implementation of biofouling management activities; or
 - (ii) If a vessel found to exhibit obviously excessive biofouling remains for greater than 21 days in the same California port or place where the violation occurred, the Division Chief may require the master, owner, operator, or person in charge of a vessel to clean or treat the vessel to remove or inactivate macrofouling, using available in-water cleaning technologies, in-water treatment technologies, or out-of-water maintenance, and in consultation with Commission staff.
 - (iii) If a master, owner, operator, or person in charge of a vessel makes a reasonable attempt to manage biofouling to reduce extent to the level required by subpart (c)(3)(B) but finds that services are unavailable, he or she will not be found in violation of subdivision (c)(3) of this section if the following conditions are met:
 - (iii.1) In-water cleaning or in-water treatment services are not available in any of the ports visited between the warning or violation of the obviously excessive biofouling provision found in subpart (c) and the vessel's next arrival to a California port or place;
 - (iii.2) All of the ports visited between the warning or violation of the obviously excessive biofouling provision found in subpart (c) and the vessel's next arrival to a California port or place are listed in the Biofouling Record Book; and
 - (iii.3) Attempts to procure in-water cleaning or in-water treatment at all of the ports visited between the warning or violation of the obviously excessive

biofouling provision found in subpart (c) and the vessel's next arrival to a California port or place are documented in the Biofouling Record Book.

- (4) Be required to maintain documentation providing evidence of such management and the resulting approximate biofouling extent within the vessel's Biofouling Record Book described in 2 CCR §2298.4.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6, 71205 and 71207 Public Resources Code

Section 2298.7. Requirements for Vessels with Extended Residency Periods.

The master, owner, operator, or person in charge of a vessel that has experienced an extended residency period since its most recent out-of-water maintenance, in-water treatment, or in-water cleaning must ensure that the vessel is compliant with the following requirements upon arrival to a California port or place:

- (a) Manage biofouling to ensure, upon arrival to a California port or place, that macrofouling percentage cover is not significantly in excess of five percent of the wetted portions of the vessel, excluding the niche areas described in 2 CCR §2298.6(b), as determined by Commission staff using the biofouling compliance assessment protocols;
- (1) Reports from any activities to manage biofouling, including in-water inspection, in-water cleaning, in-water treatment, or out-of-water maintenance, after an extended residency period shall be documented in the Biofouling Record Book.
- (b) Manage biofouling in the niche areas described in 2 CCR §2298.6(b), if present, in a manner that is consistent with the niche area management practices listed in the Biofouling Management Plan. All activities employed immediately before and after the extended residency period to manage biofouling in the niche areas described in 2 CCR §2298.6(b), if present, shall be documented in the Biofouling Record Book.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6 and 71205, Public Resources Code

Section 2298.8. Propeller Cleaning in California Waters.

Propeller cleaning in California waters is not prohibited under this article.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204, 71204.6, 71205 and 71207, Public Resources Code

Section 2298.9. Alternatives.

(a) Petitions for Alternatives.

- (1) Any person subject to these regulations may submit a petition to the Division Chief for alternatives to the requirements of Article 4.8 as applied to the petitioner.
- (2) All petitions for alternatives must be submitted in writing. A petition may be in any form, but it must contain all data and information necessary to evaluate its merits in order to fulfill the purposes of these regulations.
- (3) All petitions for alternatives must be submitted and must receive approval prior to the vessel's arrival to a California port or place.

(b) Response to Petitions.

- (1) The Division Chief shall respond in writing to any petition for alternatives within thirty days of receipt of the petition.

(c) Approval of Alternatives.

- (1) The Division Chief may approve any proposed alternatives to the requirements of Article 4.8 if she or he determines that the proposed alternatives will fulfill the purpose of these regulations as outlined in 2 CCR §2298.1(a).
- (2) If the Division Chief approves any proposed alternatives under this section, a letter of approval shall be issued to the petitioner setting forth the findings upon which the approval is based.
- (3) The Division Chief may withdraw the letter of approval of any alternative requirements at any time if he or she finds that the person or persons subject to these regulations have not complied with the approved alternative requirements.

- (4) Withdrawal of a letter of approval under this section shall be effective upon receipt by the petitioner of written notification of the withdrawal from the Division Chief.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204, 71204.6, 71205 and 71207, Public Resources Code

Section 2298.9.1. Emergency Exemptions

- (a) A vessel will be exempt from the requirements contained within Article 4.8 if all of the following conditions are satisfied:
- (1) The vessel makes an unscheduled arrival to a California port or place because of an emergency;
- (A) Arrival for scheduled bunkering only is not an emergency under this clause;
- (2) The master, operator, or person in charge of the vessel notifies the Division Chief of the emergency, and provides details on the nature of the emergency, no later than twenty-four hours after arrival;
- (3) The vessel has not arrived to another California port or place since the most recent of either the previous out-of-water maintenance or the vessel's delivery; and
- (4) The vessel will remain in California waters for 21 days or less;
- (A) If the vessel remains in California waters for greater than 21 days, the Division Chief may require the master, owner, operator, or person in charge of a vessel to clean or treat the vessel to remove or inactivate macrofouling, using available in-water cleaning technologies, in-water treatment technologies, or out-of-water maintenance, in consultation with Commission staff.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204, 71204.6, 71205 and 71207, Public Resources Code